

**REMARKS**

The Office Action mailed November 9, 2008 has been carefully considered and the following response prepared. Claims 1-20 are pending in the application. Claims 13-20 are withdrawn from consideration. After entry of amendments to the claims, claims 1-3, 6, 8-9 and 13-20 have been canceled without prejudice. New claims 21-31 have been added. Support for new claims 21-31 can be found throughout the specification and original claims 1-3. Claims 4-5, 7 and 10-12 have been amended to depend from new claim 21. No new matter has been added.

**Rejection under 35 USC 102(b)**

At page 4 of the Office Action, claims 1-8 and 10-12 were rejected under 35 USC 102(b) as anticipated by Senaratna et al. (WO 99/25191). The Examiner stated that Senaratna et al. discloses a method for inducing stress tolerance (safener) in plant material comprising applying to the plant material an effective stress-regulating amount of one or more active compounds of Formula I of the instant application wherein R<sup>1</sup> represents a carboxyl, R<sup>2</sup>, R<sup>3</sup>, R<sup>4</sup>, R<sup>5</sup> and R<sup>6</sup> each represent hydrogen, m is 0, n and o are each 1, and Z and Z'' are each oxygen (e.g., 3,5-dihydroxybenzoic acid). The Examiner further stated that Senaratna et al. discloses, at page 6, lines 1-6, using the active compound of formula I to induce tolerance to temperature, drought, freezing, heat (i.e. harmful environmental factors), and herbicide tolerance.

Applicants traverse this rejection. Claims 1-3, 6 and 8-9 have been canceled without prejudice, and new claims 21-31 have been added. Independent claim 21 is directed to methods for protecting useful plants or crop plants against phytotoxic side effects of agrochemicals, which comprises applying, as safeners, an effective amount of one or more compounds of the formula (I), as defined in the claim, or salts thereof, before, after or simultaneously with the agrochemicals to the plants, parts of plants, plant seeds or propagation material. Claims 4-5, 7, and 10-12, as amended, and new claims 22-31 depend from claim 21.

Senaratna et al. discloses the use of benzoic acid and functional derivatives thereof for inducing stress tolerance in plant material. The compounds of Formula I representing the

benzoic acid derivatives may generally be substituted at the phenyl ring by one or more substituents. Indeed, any of the values given for  $R_1$ - $R_5$  can be present at any of the five positions around the phenyl ring. Senaratna et al., however, only discloses examples with benzoic acid, salicylic acid, 5-sulfosalicylic acid, acetyl salicylic acid and methyl salicylic acid. Such compounds do not fall within the scope of the compounds of Formula I as recited in claim 21. See the definitions of  $R^2$  and  $R^6$  in claim 21, which do not encompass the hydroxyl group, or the acyloxy group. In the molecule of salicylic acid or salicylic acid derivatives, the hydroxyl group (or modified hydroxyl group) is in position 2 or 6 relative to the carboxyl group. Benzoic acid is also not within the scope of the compounds of formula I as recited in claim 21, due to the existence of at least one group  $R^3$  to  $R^5$  attached to the phenyl ring.

None of the compounds of Formula I recited in claim 21 and claims dependent thereon are specifically suggested or disclosed by Senaratna et al. The methods of claims 4-5, 7, 10-12 and 21-31 are thus not anticipated by Senaratna et al. Withdrawal of this section 102(b) rejection is respectfully requested.

### **Rejection under 35 USC 103**

At page 7 of the Office Action, the Examiner rejected claims 1-12 under 35 USC 103 as *prima facie* obvious in view of Senaratna et al. (WO 99/25191) in view of Walters et al., Annals of Applied Biology, 122: 451-456, 1993. The Examiner alleged that it would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine the teachings of Senaratna et al. and Walters et al. to formulate a method for protecting useful plants, wherein the compounds of Formula I are used to induce resistance against infection by pathogens because salicylic acid, which is in the phenolic acid family along with the compounds of Formula I in the instant application, is suggested to induce the appearance of systemic induced resistance (SIR) in crop plants such a cucumber and tobacco (Walters et al. page 452, paragraph 2), and it is known in the art that SIR is effective against a wide range of pathogens (Walters et al., page 451, paragraph 3). The Examiner concluded that it would be *prima facie* obvious to combine two methods, each of which is taught by the prior art to be useful for the same purpose,

in order to form a third method that is to be used for the very same purpose, the idea of combining them flowing logically from their having been individually taught in the prior art.

Applicants traverse this rejection. A *prima facie* case of obviousness requires the following: (1) there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings; (2) there must be a reasonable expectation of success; and (3) the prior art reference (or references when combined) must teach or suggest all the claim limitations. MPEP at 2143.

As discussed above, claims 1-3, 6 and 8-9 have been canceled without prejudice, and new claims 21-31 have been added. Independent claim 21 is directed to methods for protecting useful plants or crop plants against phytotoxic side effects of agrochemicals, which comprises applying, as safeners, an effective amount of one or more compounds of the formula (I), as defined in the claim, or salts thereof, before, after or simultaneously with the agrochemicals to the plants, parts of plants, plant seeds or propagation material. Claims 4-5, 7, and 10-12, as amended, and new claims 22-31 depend from claim 21.

Senaratna et al. discloses the use of benzoic acid and functional derivatives thereof for inducing stress tolerance in plant material. The compounds of Formula I representing the benzoic acid derivatives may generally be substituted at the phenyl ring by one or more substituents. Indeed, any of the values given for R<sub>1</sub>-R<sub>5</sub> can be present at any of the five positions around the phenyl ring. Senaratna et al., however, only discloses examples with benzoic acid, salicylic acid, 5-sulfosalicylic acid, acetyl salicylic acid and methyl salicylic acid. Such compounds do not fall within the scope of the compounds of Formula I as recited in claim 21. Senaratna et al. discloses at page 6, lines 1-6 that the compounds of Formula I can be used to induce tolerance to drought, desiccation, drought, temperature, salinity, post transplant stress, post harvest weight loss, post harvest multiple stress and herbicide tolerance.

Walters et al. does not remedy the deficiencies of Senaratna et al. Walters et al. teaches treatment of barley plants with salicylic acid, salicylate and acetylsalicylic acid for reducing

powdery mildew infection on the plants, and also teaches similar effects when applying other phenolic acids such as vanillic acid, isovanillic acid or syringic acid. The teachings of Walter et al., however, are limited to reducing powdery mildew infection on the plants. Such effects are not safener effects for reducing phytotoxic effects of agrochemicals on crop plants as is the effect of the method as claimed.

Applicants respectfully submit that a *prima facie* case of obviousness has not been established, and that the present rejection is improper and should be withdrawn. The combination of Senaratna et al. and Walters et al. does not teach or suggest all of the limitations of claims 4-5, 7, 10-12 and 21-31. There is no disclosure or suggestion in the combined teachings of the cited references of the methods of claims 4-5, 7, 10-12 and 21-31 for protecting useful plants or crop plants against phytotoxic side effects of agrochemicals. Due to the limited number of examples and clear focus of Senaratna et al. on the use of salicylic acid, salicylates and benzoic acid, Senaratna et al. does not teach the same or better properties of other benzoic acid derivatives such as those recited in claim 21, as good safeners for reducing phytotoxic side-effects of agrochemicals on crop plants. As shown in the specification in the Examples at pages 94-100, compounds of Formula I, as defined in claim 21, reduce herbicide damage to crop plants without negatively affecting or substantially reducing the activity of the herbicide against unwanted plants. There is no suggestion or disclosure in Walters et al. of the compounds of Formula I as defined in claim 21, or the use of such compounds as safeners to reduce the phytotoxic effects of herbicides.

Claims 4-5, 7, 10-12 and 21-31 are not obvious in view of Senaratna et al. and Walters et al. Withdrawal of this section 103 rejection is respectfully requested.

In view of the above, the present application is believed to be in a condition ready for allowance. Reconsideration of the application is respectfully requested and an early Notice of Allowance is respectfully requested.

The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 03-2775, under Order No. 09879-00043-US. A duplicate copy of this paper is enclosed.

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Respectfully submitted,

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